

CLAIMS

1. Method for fractionating a cooking oil, in particular frying oil, using a solvent at supercritical pressure, characterized in that it comprises the steps
5 consisting in:

- contacting, in a mixer, the cooking oil with the solvent at supercritical pressure;

- separating the resulting mixture into two phases in a decanter, namely a light phase and heavy phase;

10 - decompressing the light phase and the heavy phase so as to recuperate the solvent and the treated oil and the treatment residues respectively.

2. Method according to Claim 1, characterized in that the fluid at supercritical pressure is constituted by carbon dioxide.

3. Method according to Claim 2, characterized in that the fluid at supercritical
15 pressure is constituted by a mixture of an organic solvent in carbon dioxide at a pressure included between 7.4 MPa and 50 Mpa, and more favourably between 20 MPa and 40 MPa and at a temperature included between 0°C and 80°C.

4. Method according to Claim 3, characterized in that the solvent is a light hydrocarbon having between 2 and 5 carbon atoms, such as ethane, propane and
20 butane.

5. Method according to Claim 3, characterized in that the solvent is an alcohol, and more favourably ethanol.

6. Method according to Claim 3, characterized in that the solvent is a ketone, and more favourably acetone.
7. Method according to Claim 3, characterized in that the solvent is an ester, and more favourably ethyl acetate.
- 5 8. Method according to any one of the preceding Claims, characterized in that the heavy phase is recycled in part with the initial feedstock constituted by the cooking oil to be treated.

upon which, during the process, the heavy phase is recycled in part with the initial feedstock constituted by the cooking oil to be treated.